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C2
CONT.
flavocaldarius, B. acidopullulicus, Bacillus sp APC-9603, B. sectorramus, B. cereus, and B. fermus.

C3
CUT
5. (Amended) The pullulanase of Claim 3 wherein the *B. deramificans* pullulanase has the designation T89.117D in the LMG culture collection.

6. (Amended) The pullulanase of Claim 1 wherein the modification is a deletion of amino acids from the amino terminus of about 100 amino acids.

7. (Amended) The pullulanase of Claim 1 wherein the modification is a deletion of amino acids from the amino terminus of about 200 amino acids.

8. (Amended) The pullulanase of Claim 1 wherein the modification is a deletion of amino acids from the amino terminus of about 300 amino acids.

9. (Amended) The pullulanase of Claim 6 wherein the deletion is 98 amino acids from the amino terminus of *B. deramificans* pullulanase.

10. (Amended) The pullulanase of Claim 6 wherein the deletion is 102 amino acids from the amino terminus of *B. deramificans* pullulanase.

11. (Amended) The pullulanase of Claim 1 wherein the modification is an addition of at least one amino acid to the amino terminus of the mature pullulanase amino acid sequence.

12. (Amended) The pullulanase of Claim 11 wherein the pullulanase is obtainable from *Bacillus deramificans* and the additional amino acid at the amino terminus is an Alanine.

13. (Amended) A truncated *Bacillus* pullulanase produced by the method comprising the steps of obtaining a recombinant host cell comprising nucleic acid encoding mature pullulanase, culturing said host cell under conditions suitable for the production of modified pullulanase and optionally recovering the modified pullulanase.

14. (Amended) The pullulanase of Claim 13 wherein the nucleic acid encoding mature pullulanase has at least 70% identity to the polynucleotide sequence as shown in SEQ ID NO:1.

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C35P2
CONT.

15. (Amended) The pullulanase of Claim 13 wherein the host cell is *B. licheniformis* which comprises a first gene encoding Carlsberg protease and a second gene encoding endo Glu C protease, the first and/or second gene which codes for the protease(s) having been altered such that the protease(s) is/are inactivated.

~~C4~~ 27. (Amended) An enzymatic composition comprising a truncated *Bacillus* pullulanase.

~~C4~~ 28. (Amended) The enzymatic composition of Claim 27 wherein the pullulanase has a deletion of amino acids from the amino terminus of up to about 100 amino acids.

~~C4~~ 29. (Amended) The enzymatic composition of Claim 27 wherein the pullulanase has a deletion of amino acids from the amino terminus of up to about 200 amino acids.

~~C4~~ 30. (Amended) The enzymatic composition of Claim 27 wherein the pullulanase has a deletion of amino acids from the amino terminus of up to about 300 amino acids.

~~C4~~ 31. (Amended) The composition of Claim 27 wherein the pullulanase has the amino acid sequence as shown in SEQ ID NO:2 beginning at amino acid residue 99, a glutamic acid.

~~C4~~ 32. (Amended) The composition of Claim 27 wherein the pullulanase has the amino acid sequence as shown in SEQ ID NO:2 beginning at amino acid residue 103, a glutamic acid.

~~C4~~ 33. (Amended) The composition of Claim 27 further comprising an enzyme selected from the group consisting of glucoamylase, alpha-amylase, beta-amylase, alpha-glucosidase, isoamylase, cyclomaltodextrin, glucotransferase, beta-glucanase, glucose isomerase, saccharifying enzymes, and enzymes which cleave glucosidic bonds.

~~C5~~ 35. (Amended) The composition of Claim 34 wherein the glucoamylase is obtainable from an *Aspergillus* strain.

~~C5~~ 36. (Amended) The composition of Claim 35 wherein the *Aspergillus* strain includes *Aspergillus niger*, *Aspergillus awamori* and *Aspergillus foetidus*.

~~C6~~ 39. (Amended) The composition of Claim 27 comprising at least 60% truncated *Bacillus* pullulanase.

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C6

Sub 3:1
40. (Amended) The composition of Claim 27 comprising at least 80% truncated *Bacillus pullulanase*.

Thus, the claims as currently presented and under consideration, are presented below for the Examiner's convenience and to comply with 37 CFR §1.121:

1. (Amended) A truncated *Bacillus pullulanase* which is capable of catalyzing the hydrolysis of an alpha-1,6-glucosidic bond.

3. (Amended) The pullulanase of Claim 1 wherein the *Bacillus* is selected from the group consisting of *B. subtilis*, *B. deramificans*, *B. stearothermophilus*, *B. naganoensis*, *B. flavocaldarius*, *B. acidopullulyticus*, *Bacillus* sp APC-9603, *B. sphaeroides*, *B. cereus*, and *B. fermentus*.

5. (Amended) The pullulanase of Claim 3 wherein the *B. deramificans* pullulanase has the designation T89.117D in the LMG culture collection.

6. (Amended) The pullulanase of Claim 1 wherein the modification is a deletion of amino acids from the amino terminus of about 100 amino acids.

7. (Amended) The pullulanase of Claim 1 wherein the modification is a deletion of amino acids from the amino terminus of about 200 amino acids.

8. (Amended) The pullulanase of Claim 1 wherein the modification is a deletion of amino acids from the amino terminus of about 300 amino acids.

9. (Amended) The pullulanase of Claim 6 wherein the deletion is 98 amino acids from the amino terminus of *B. deramificans* pullulanase.

10. (Amended) The pullulanase of Claim 6 wherein the deletion is 102 amino acids from the amino terminus of *B. deramificans* pullulanase.

11. (Amended) The pullulanase of Claim 1 wherein the modification is an addition of at least one amino acid to the amino terminus of the mature pullulanase amino acid sequence.

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12. (Amended) The pullulanase of Claim 11 wherein the pullulanase is obtainable from *Bacillus deramificans* and the additional amino acid at the amino terminus is an Alanine.

13. (Amended) A truncated *Bacillus* pullulanase produced by the method comprising the steps of obtaining a recombinant host cell comprising nucleic acid encoding mature pullulanase, culturing said host cell under conditions suitable for the production of modified pullulanase and optionally recovering the modified pullulanase.

14. (Amended) The pullulanase of Claim 13 wherein the nucleic acid encoding mature pullulanase has at least 70% identity to the polynucleotide sequence as shown in SEQ ID NO:1.

15. (Amended) The pullulanase of Claim 13 wherein the host cell is *B. licheniformis* which comprises a first gene encoding Carlsberg protease and a second gene encoding endo Glu C protease, the first and/or second gene which codes for the protease(s) having been altered such that the protease(s) is/are inactivated.

27. (Amended) An enzymatic composition comprising a truncated *Bacillus* pullulanase.

28. (Amended) The enzymatic composition of Claim 27 wherein the pullulanase has a deletion of amino acids from the amino terminus of up to about 100 amino acids.

29. (Amended) The enzymatic composition of Claim 27 wherein the pullulanase has a deletion of amino acids from the amino terminus of up to about 200 amino acids.

30. (Amended) The enzymatic composition of Claim 27 wherein the pullulanase has a deletion of amino acids from the amino terminus of up to about 300 amino acids.

31. (Amended) The composition of Claim 27 wherein the pullulanase has the amino acid sequence as shown in SEQ ID NO:2 beginning at amino acid residue 99, a glutamic acid.

32. (Amended) The composition of Claim 27 wherein the pullulanase has the amino acid sequence as shown in SEQ ID NO:2 beginning at amino acid residue 103, a glutamic acid.

33. (Amended) The composition of Claim 27 further comprising an enzyme selected from the group consisting of glucoamylase, alpha-amylase, beta-amylase, alpha-glucosidase,

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isoamylase, cyclomaltdextrin, glucotransferase, beta-glucanase, glucose isomerase, saccharifying enzymes, and enzymes which cleave glucosidic bonds.

34. The composition of Claim 27 further comprising a glucoamylase.

35. (Amended) The composition of Claim 34 wherein the glucoamylase is obtainable from an *Aspergillus* strain.

36. (Amended) The composition of Claim 35 wherein the *Aspergillus* strain includes *Aspergillus niger*, *Aspergillus awamori* and *Aspergillus foetidus*.

37. The composition of Claim 27 wherein said composition is in a solid form.

38. The composition of Claim 27 wherein said composition is in a liquid form.

39. (Amended) The composition of Claim 27 comprising at least 60% truncated *Bacillus* pullulanase.

40. (Amended) The composition of Claim 27 comprising at least 80% truncated *Bacillus* pullulanase.